

CLAIMS

What is claimed is:

1. A method of evaluating sequencing rules for a multiple lot auction, comprising:
 - obtaining a next set of bids from a plurality of simulated bidders;
 - simulating the multiple lot auction using the next set of bids and a sequencing rule until simulated bidding on all lots is closed;
 - simulating the multiple lot auction using a different sequencing rule until bidding on all lots is closed; and
 - comparing results of the simulated auctions with both sequencing rules.
2. The method of claim 1 wherein simulating the multiple lot auction with each sequencing rule comprises simulating a multiple lot, reverse auction.
3. The method of claim 1 wherein simulating the multiple lot auction with each sequencing rule further comprises processing a bid from the next set of bids.
4. The method of claim 3 wherein processing a bid from the next set of bids comprises at least one act selected from a group consisting of recording the bid, resetting a closing time, and permitting each simulated bidder to be informed of the bid being processed.
5. The method of claim 1 wherein obtaining the next set of bids comprises determining, for each of a plurality of simulated bidders, whether the bidder is to submit a bid, when the bidder is to submit a bid, and an amount of the bid.
6. The method of claim 5 wherein, if a simulated bidder submits a bid, the bid is submitted according to a random time interval.
7. The method of claim 1 wherein simulating the multiple lot auction comprises simulating auction time.

8. The method of claim 1 wherein comparing results comprises, for each simulated auction, determining a metric selected from a group consisting of total procurement cost of all of the lots in the multiple lot auction, average procurement cost per lot, and mean procurement cost per lot.

9. A storage medium containing code that can be executed by a processor and, when executed, causes the processor to:

select a first sequencing rule that dictates how multiple lots in a multiple lot auction are to be auctioned;

simulate a multiple lot auction using said first sequencing rule until bidding on all lots is closed;

evaluate results of the auction;

select a second sequencing rule, simulate the multiple lot auction using said second sequencing rule until simulated bidding on all lots is closed, and evaluate results of the auction; and

determine a metric for each simulated auction.

10. The storage medium of claim 9 wherein the metric comprises a metric selected from a group consisting of total cost of all of the lots in the multiple lot auction, average cost per lot, and mean cost per lot.

11. The storage medium of claim 9 wherein the code further causes the processor to compare the metrics from the simulated auctions.

12. The storage medium of claim 9 wherein the code further causes the processor to model behavior of a plurality of simulated bidders.

13. A system, comprising:

a processor; and

storage coupled to the processor and containing an application that is executable by the processor;

wherein, when executed, the application causes the processor to simulate a multiple lot auction using a plurality of sequencing rules and determine a metric associated with each simulated multiple lot auction, the metric usable to evaluate results of the simulated multiple lot auction.

14. The system of claim 13 wherein the processor prevents a simulated bidder from winning two lots that are incompatible.

15. The system of claim 13 wherein the processor determines, for each lot, an expected utility gain value for each of a plurality of simulated bidders.

16. The system of claim 15 wherein the processor eliminates lots from bidding by a simulated bidder if the expected utility gain value for that lot and bidder is less than a threshold.

17. The system of claim 15 wherein the processor eliminates lots from bidding by a simulated bidder if the expected utility gain value for that lot and bidder is less than a maximum value.

18. A system, comprising:
means for simulating bids in a simulated multiple lot auction;
means for selecting a bid from the simulated bids for each of a plurality of lots in the multiple lot auction;
means for sequencing bidding on each of the plurality of lots in accordance with a first sequencing rule; and
means for determining a first metric associated with the simulated multiple lot auction.

19. The system of claim 18 further comprising means for simulating the multiple lot auction using a second sequencing rule and means for determining a

second metric associated with the simulated multiple lot auction when using the second sequencing rule.

20. The system of claim 19 further comprising means for comparing the first and second metrics.

21. The system of claim 18 further comprising means for simulating time in the multiple lot auction.

22. The system of claim 18 wherein the multiple lot auction comprises a reverse auction.